

REMARKS

This Amendment is filed in response to the Office Action mailed May 17, 2005.

All objections and rejections are respectfully traversed.

Claims 1-16 and 37-57 are in the case.

Claims 1, 9, 13, 16, and 46 were amended to better claim the invention.

No claims were added.

Claim Rejections – 35 U.S.C. § 101

At paragraph 5 of the Office Action, claim 57 was rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. Claim 57 relates to electromagnetic signals propagating on a computer network, and the Examiner states:

Claim 57 is not limited to tangible embodiments, it refers to intangible embodiments (e.g. wireless transmission media, signals propagating through space, radio waves, infrared signals, etc.). As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

The Applicant respectfully points out that the *MPEP 8th edition, Revision 2* clearly indicates that electromagnetic signals may be patented. MPEP 2106 (IV)(B)(1)(c) states:

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, *per se*, and as such are nonstatutory natural phenomena. *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 112-14 (1853). However, a signal claim directed to a practical application of electromagnetic energy is statutory regardless

of its transitory nature. See *O'Reilly*, 56 U.S. at 114-19; *In re Breslow*, 616 F.2d 516, 519-21, 205 USPQ 221, 225-26 (CCPA 1980).

Applicants respectfully point out that in the current digital age, users commonly download drivers from an internet site, such as a printer driver from the Hewlett Packard website, and transmit the software as electromagnetic signals carrying instructions for execution on the user's computer. Similarly, Applicant's novel invention can be placed on a website for download, and transmitted as electromagnetic signals carrying instructions for execution. Accordingly, claim 57 is directed to protecting the Applicant from infringement in such a situation.

Clearly, a person of ordinary skill in the art of the claimed invention can surely put computer code to practice for the invention of website downloading without undue experimentation. Accordingly, a person of ordinary skill in the art of the claimed invention would have full understanding how to place appropriate code on a webpage for others to download.

Claim Rejections – 35 U.S.C. § 102

At paragraph 7 of the Office Action, claims 1-5, 9-14, 37-44, 46-49, and 51-54 were rejected under 35 U.S.C. 102(b) as being anticipated by Carusone, Jr. et al., U.S. Patent No. 5,157,667 issued October 20, 1992 (hereinafter Carusone).

The present invention, as set out in representative claim 1, comprises in part:

1. A method for storing and distributing data in a network storage system having a plurality of devices interconnected with one or more switches, the method comprising the steps of:

writing, by one of the plurality of devices, a set of data to a memory associated with a port of one of the one or more switches, the memory being readable by all of the plurality of devices;

including in the set of data a disk identification string indicating disks that are offline and inaccessible to any of the plurality of devices; and

reading, by one of the plurality of devices, the set of data from the memory.

Carusone discloses a method for diagnosing the cause of a fault in a link-connect network without maintaining system-wide configuration information. See col. 4, lines 41-48. In this method, when a device is initially connected or reconnected to a neighboring device, the devices exchange link adapter identifiers (LAIDs) that identify the respective device and the interface or port involved in the link connection. See col. 5, lines 1-6. Each LAID is then stored locally at both devices. See col. 9, lines 16-22. If a failure occurs, an error report, including the neighbor's LAID, is transmitted to a central location for troubleshooting the failure. See col. 9, lines 22-27.

The Applicant respectfully urges the Carusone is silent concerning the Applicant's claimed invention of

including in the set of data a disk identification string indicating disks that are offline and inaccessible to any of the plurality of devices.

The disclosure of Carusone is silent on Applicant's novel claim of writing a disk identification string as indication that a disk is offline and inaccessible to the devices on the network. Carusone discloses storing link adapter identifiers (LAID) to identify links to all neighboring devices, and when a failure is observed, including the LAID in an error

messages sent to a centralized location for troubleshooting the location of the failure.

Clearly Carusone does not disclose writing a set of data to indicate the status of disks on the network, and *including in the set of data a disk identification string indicating disks that are offline and inaccessible to any of the plurality of devices.*

At page 6 of the Office Action, the Examiner states:

The further limitation of one of the plurality of file servers writing an identification information including a disk identification string to one of the ports of one of the switches in response to one of the disks/devices being offline (failure) is taught by Carusone as when a failure occurs, each unit writes or sends failure reports which include the LAID of the link adapter that detected the failure to the central location thru one of the ports (e.g. see column 9, 33-51).

Applicant respectfully disagrees with the Examiner. Examiner references the following lines of Carusone:

Furthermore, according to the invention, whenever a failure occurs, failure reports are sent by each unit that observes the failure, to a central location. For the sake of illustration, service processor 272 could be designated as the central location. As a further example, the service processors could be interconnected via links 290 and 291 (as shown in FIG. 2) to LAN to which a PC for processing error reports is attached, etc.

The invention contemplates means for generating a single fault message, from the error reports transmitted to the central location, to be operation at the central location. Such means will be explained in greater detail hereinafter with reference to FIG. 4. For now however, it should be understood that each failure report is transmitted to a central location and that each failure report includes the LAID of the link adapter that detects the failure as well as the LAID of the link adapter at the nearest neighbor to the unit reporting a failure. (Carusone, column 9, 33-51)

As shown in the above lines, Carusone teaches a device sending a failure report to a central location whenever the device observes a failure, the failure report includes the LAID of the link adapter that detected the failure as well as the LAIDs of its neighbors.

Nowhere in the above lines does Carusone disclose the device writing failure data to a switch, or even identifying which device actually caused the failure. Clearly, Carusone does not disclose writing a disk identification string to one of the ports of one of the switches in response to one of the disks/devices being offline.

Accordingly, Applicant respectfully urges that Carusone is legally precluded from anticipating the presently claimed invention because of the absence of Applicant's claimed novel

including in the set of data a disk identification string indicating disks that are offline and inaccessible to any of the plurality of devices.

The present invention, as set out in representative claim 41, comprises in part:

41. A method for storing and distributing data in a network storage system having a plurality of devices interconnected with a switch, the method comprising the steps of:

writing, by one of the plurality of devices, a set of data into a port memory associated with a port of the switch; and

including in the set of data a disk identification string, the disk identification string indicating a name of a switch, a port number on the switch, a disk number, and a status of the disk.

The Applicant respectfully urges the Carusone is silent concerning the Applicant's claimed invention of

including in the set of data a disk identification string, the disk identification string indicating a name of a switch, a port number on the switch, a disk number, and a status of the disk.

The disclosure of Carusone is silent on Applicant's novel claim of writing a disk identification string to indicate disks that are offline and inaccessible to devices on the network, the string including *a name of a switch, a port number on the switch, a disk number, and a status of the disk*. Carusone discloses a device storing network topology information, and using link adapter identifiers (LAIDs) to identify the link connections in the topology. Carusone further discloses the LAIDs "consisting of the unit ID plus a unique number (the interface ID, or port number) indicating a specific adapter on the unit." See column 5, lines 1-5.

Carusone does not disclose a device writing disk status information or using a LAID consisting of *a disk number, or status of the disk*. Clearly, Carusone does not disclose *including in the set of data a disk identification string, the disk identification string indicating a name of a switch, a port number on the switch, a disk number, and a status of the disk*.

Accordingly, Applicant respectfully urges that Carusone is legally precluded from anticipating the presently claimed invention because of the absence of Applicant's claimed novel

including in the set of data a disk identification string, the disk identification string indicating a name of a switch, a port number on the switch, a disk number, and a status of the disk.

Claim Rejections – 35 U.S.C. § 103

At paragraph 9 of the Office Action, claims 6, 8, 15-16, 45, 50, and 55-56 were rejected under 35 U.S.C. 103(a) as being unpatentable over Carusone.

The present invention, as set out in representative claim 16, comprises in part:

16. A computer-readable medium, including program instructions executing on a file server, for storing and distributing data in a network storage system, the program instructions performing the steps of:
writing, by one of the plurality of devices, a set of data, the data ***including a disk identification string indicating disks that are offline and inaccessible to any of the plurality of devices***, to a memory associated with a port of a switch, the memory being readable by all of said plurality of devices connected to the network storage system.

Applicant respectfully urges that, as set forth in the argument pertaining to claim 1, the disclosure of Carusone is silent on Applicant's novel claim of

including a disk identification string indicating disks that are offline and inaccessible to any of the plurality of devices.

Accordingly, Applicant respectfully urges that Carusone is legally insufficient to make obvious the presently claimed invention under 35 U.S.C. 103 because of the absence of the Applicant's claimed novel

including a disk identification string indicating disks that are offline and inaccessible to any of the plurality of devices.

The present invention, as set out in representative claim 56, comprises in part:

56. A computer readable media, comprising:
said computer readable media containing instructions for execution on a processor for the practice of a method for operating a plurality of devices interconnected with a switch, comprising:

writing, by one of the plurality of devices, a set of data into a port memory associated with a port of the switch; and

including in the set of data a disk identification string, the disk identification string indicating a name of a switch, a port number on the switch, a disk number, and a status of the disk.

Applicant respectfully urges that, as set forth in the argument pertaining to claim 41, the disclosure of Carusone is silent on Applicant's novel claim of

including in the set of data a disk identification string, the disk identification string indicating a name of a switch, a port number on the switch, a disk number, and a status of the disk.

Accordingly, Applicant respectfully urges that Carusone is legally insufficient to make obvious the presently claimed invention under 35 U.S.C. 103 because of the absence of the Applicant's claimed novel

including in the set of data a disk identification string, the disk identification string indicating a name of a switch, a port number on the switch, a disk number, and a status of the disk.

In the event that the Examiner deems personal contact desirable in disposition of this case, the Examiner is encouraged to call the undersigned attorney at: (617) 951-3028.

All independent claims are believed to be in condition for allowance.

All dependent claims are believed to be dependent from allowable independent claims, and therefore in condition for allowance.

Favorable action is respectfully solicited.

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Respectfully submitted,

A handwritten signature in cursive script, appearing to read "A. Sidney Johnston".

A. Sidney Johnston
Reg. No. 29,548
CESARI AND MCKENNA, LLP
88 Black Falcon Avenue
Boston, MA 02210-2414
(617) 951-2500